

RECENT LITERATURE.

Beebe's Monograph of the Pheasants.¹—Birds, from their gorgeous plumage, pleasing song and varied habits, possess an interest quite apart from the purely technical consideration of their structure and systematic relationship, subjects which in the lower orders of the animal kingdom cover practically the whole range of possibility in their study; and ornithology, fortunate in having such beings as its especial province, possesses in consequence a far broader literature than many of the other branches of zoological science can boast.

From the earliest days bird study has attracted, in addition to the technical ornithologist, men gifted with both literary and artistic talents, with the result that we are able to point with pride to a long series of splendid works of art and narratives of surpassing interest as a part of the literature of our favorite science. To those who have handled the great monographs of Gould, Elliot, Sharpe and others or the earlier classics of Catesby, Wilson and Audubon, there is the inevitable feeling that this phase of ornithological activity should not be allowed to perish, and hence we hail with especial delight any present-day contribution to this field.

Probably no other work of this sort has been looked forward to with greater anticipation than Capt. William Beebe's 'Monograph of the Pheasants,' the first volume of which is now before us, and to say that it fully meets our most sanguine expectations is but inadequate praise. A sumptuous royal quarto, 12 x 16 in., beautifully printed on special rag paper, with splendid colored plates by six of the leading bird artists of the world — reproduced with wonderful beauty and accuracy, photogravures of the haunts of the various species and a text of exceptionally high quality — all go to form a work of art and a literary production well worthy of the twentieth century. Beside the illustrations already referred to we must mention the colored plates which show the successive plumages, of one species in nearly every genus, from the natal down to the adult, and others depicting the eggs.

Much as we are indebted to Capt. Beebe and his corps of artists, through whose ability and talents this splendid work has been produced, back of it all our thanks are due to the generosity of Col. Anthony R. Kuser, of

¹ A Monograph of the Pheasants | By | William Beebe | Curator of Birds of the New York Zoological Park; Fellow of the New York Zoological | Society and Director of the Tropical Research Station in British Guiana; Fellow | of the American Ornithologists' Union and of the New York Academy | of Sciences; Member of the British Ornithologists' Union; | Corresponding Member of the Zoological | Society of London, etc. | In four Volumes | Volume I Published under the auspices of the | New York Zoological Society by | Witherby & Co. 326 High Holborn, London, England | 1918 | Royal Quarto (12 x 16 in.) pp. i-xlix - 1-198, 19 colored plates, 16 photogravures and 5 maps. Edition limited to 600 copies; price of each volume \$62.50.

Bernardsville, N. J., one of the Board of Managers of the New York Zoölogical Society, who suggested the undertaking and who has liberally supported both the necessary explorations and the subsequent publication, and his hope, as set forth in the preface by Dr. Henry Fairfield Osborn, of producing "a work which, from the standpoint of truth, of beauty and of thoroughness, should be worthy of the important place which the pheasants occupy in the science of ornithology," has been abundantly realized.

Many of the members of the American Ornithologists' Union remember hearing Capt. Beebe discuss his proposed Asiatic journey for the study of pheasants, at the meeting in New York, in the autumn of 1909, and two years later, at the Philadelphia meeting, they enjoyed his splendid photographs of the various countries through which he had travelled in the meantime — Ceylon, India, Burma, China, Japan, the Malay States, Borneo and Java — visiting the haunts of one or more species of each of the nineteen recognized genera of Pheasants. Now it is our privilege to share the knowledge that he has gained of these wonderful birds and to read and discuss the conclusions to which his studies of the group have led.

The present volume, the first of four, comprises the Blood Partridges (*Ithaginis*) of which six species and two additional subspecies are recognized; the Tragopans (*Tragopan*) with five species and one subspecies; the Impeyan Pheasants (*Lophophorus*) and the Eared Pheasants (*Crossoptilon*) each with three species. All of the species are figured in colors with the exception of two of the Blood Partridges which are very close to other figured forms. Under each genus there is a generic diagnosis with synonymy and a key to the species and subspecies, as well as a map showing their distribution. Under the species there is, whenever possible, an account of the bird from the author's personal experience with it in the field, written in Capt. Beebe's well known attractive style. This is followed by sections headed 'General Distribution'; 'General Account' (of habits, etc.); 'Early History'; 'Captivity' and 'Detailed Description.' Under one or other of these headings the author has collected all the available published information on the species, together with a vast amount of original matter derived not only from his explorations in the native haunts of the birds, but from his long experience with many of them in captivity and his studies of the material preserved in all the important museums of the world. The beautiful photogravures of the haunts of the various species, from photographs by the author, are so arranged as to exhibit on one plate a general view of the habitat, together with a near view showing the details of the environment. There is also an admirable device of printing on the thin interleaf of each plate a couple of terse paragraphs explaining just what it represents, calling attention to some peculiar pose or action of the bird, or some important feature of the landscape, which adds greatly to the value of the illustration and to the reader's appreciation of it. We do not mean to intimate that the plates do not

"speak for themselves," for they do to a remarkable degree; but there are in all pictures features quite apart from the artistic quality, which we do not appreciate until our attention is called to them, and some previous knowledge of the subject always adds to our interest.

At the end of each general account is a list of references, technical names of animals and plants mentioned in the text, etc., correlated by page and line, and printed all together in this way to avoid the use of footnotes. This plan while it no doubt adds to the beauty of the text is rather inconvenient for ready reference. Of the colored plates in the present volume, eight are by G. E. Lodge; six by Archibald Thorburn; four by H. Gronvold and one by Charles R. Knight. The two other artists who will contribute to the later volumes are Louis Agassiz Fuertes and H. Jones. The original of Mr. Knight's plate was an oil while all the others were water-colors; and the reproductions are by several different processes, some printed upon smooth paper others on "egg-shell" — thus giving us the benefit of a variety of methods, some better suited to one painting, some to another, but all of such excellence that there is little choice except such as individual preference may dictate.

The vexatious question of how to treat subspecies in a work of this sort has evidently caused the author no little trouble, as it has all who have had to deal with it, and the method adopted will we fear prove a little confusing to those not conversant with the difficulties involved. The specific aggregate called the "Himalayan Blood Partridge" and the two races (or subspecies) into which it is divided — the "Nepal Himalayan Blood Partridge" and the "Sikhim Himalayan Blood Partridge" — are all considered under separate headings printed in exactly the same-sized type; the first contains the general information common to the two races while the last two contain only special information relative to the particular race under consideration. In spite of text explanations, however, we fear that the uninitiated reader will think that three different kinds of birds are being treated of instead of two. While well aware that this is the method adopted in the A. O. U. 'Check-List,' the reviewer has reached the opinion that it is far clearer, either to consider the two subspecies only without reference to the specific aggregate, putting the general account of habits, etc., under the first; or to consider only the species, so far as headings go, and mention inconspicuously at the end of the account, the geographic races (subspecies) into which it may be divided. This is a problem of such general interest today that it cannot be passed without comment. We notice also some good-natured sarcasm here and there directed against nomenclature as such. "What's in a name?" says Capt. Beebe; "let us pass from discussion of the artificial handle applied by man during the last few years of the Tragopan's existence to the real vital study of the birds themselves." Nevertheless he has occasion to make use of quite a number of these artificial handles and to choose between the several that have in many cases been given to the same species or genus. While it is gratifying to find him saying of one

name, that it has "the profound merit of priority, and, hoping it may make toward the long-desired goal of stability in nomenclature, I have chosen to adopt it," we regret to find in another instance that he deliberately violates the rules of the International Commission by choosing to emend the spelling of the genus *Ithagenis*. If everyone chooses for himself in matters of names we shall certainly not arrive very soon at the desired goal. However, these are but technical matters, which the reviewer may perhaps be pardoned for mentioning, since they are constantly coming to his attention in all sorts of exasperating forms in the varied literature of the day, but we now cheerfully adopt Capt. Beebe's suggestion and pass on to things worth while.

Immediately preceding the systematic part of the work is an admirable introduction of thirty-one pages, giving a résumé of many subjects which are treated more in detail under the various species. This contribution is one of the most important portions of the text and is deserving of careful study by all interested in the general problems of ornithology as well as in the pheasants in particular.

In its perusal we notice that Capt. Beebe follows Sharpe in the general classification of the pheasants, and omits the Turkeys and Guinea-fowl which figured in Elliott's monograph, but which are now considered to represent quite independent families. While omitting most of the subfamily *Perdicinae*, which are not popularly regarded as pheasants, and were not included in the family in Elliot's day, he retains in his work two genera, the Blood Partridges and the Tragopans, which Elliot considered members of the family and which are generally considered as pheasants. Thus we see that the word pheasant and the family Phasianidæ are by no means coextensive terms. While adopting Sharpe's four subfamilies Capt. Beebe does not do so blindly, and has the satisfaction of citing an excellent character for their separation which we do not think has been previously used, i. e. the order of molt of the tail feathers — a character of particular interest to the reviewer, as he called attention to it in another connection in 1896. Another character which he makes use of is geographic distribution, and "by refusing to include in any single genus species whose ranges coincided or overlapped" he effected "a breaking up or coalescing of certain genera whose status had been in dispute." While strict adherence to this rule in genera of more numerous species would not be practicable the principle involved is one that deserves more consideration than has usually been accorded to it. External modifications of structure, especially in such wonderfully plumaged birds as the pheasants, often obscure their true relationships and these are often revealed by a study of their geographic distribution. Considering this subject further and entirely apart from the systematic relationship of the species, Capt. Beebe concludes that the pheasants are of northern origin and that the farther south we go the greater is their specialization. In this investigation he would we think have been justified in including the twenty-nine genera of *Perdi-*

cine which, not being regarded as "pheasants," have no place in the systematic part of the monograph, but are none the less Phasianidæ, and his conclusions would thereby have been still further strengthened. Under 'Comparative Abundance' we learn that pheasants fall into three groups according to their gregariousness. The Argus and its allies live a solitary life, associated with none of their kind except for a brief period in the mating season; others, like the Kaleege, are eminently gregarious; while still others, like the Tragopans and Jungle Fowl, are usually found in pairs.

Protective coloration comes in for some very intelligent discussion. Capt. Beebe suggests a rather novel test to determine whether a given bird is really protectively colored or not. The wild pheasants which have no experience with man act exactly the same upon his approach as they do in the presence of their natural enemies, and his plan is to observe the bird's realization of its own degree of protection as shown by its actions. Dull colored hen-pheasants almost invariably squatted on the approach of an intruder, thus showing their reliance on their ability to escape observation, while the brilliantly colored cocks immediately took wing, a tacit admission of their lack of protection so far as coloration is concerned. Capt. Beebe is, however, pessimistic as to the possibility of any sort of compromise on the part of those who hold that all animals are protectively colored. As an illustration he humorously states that on one trip he saw some 600 peafowl, each one of which took wing immediately and sought the tops of the highest trees in the neighborhood which commanded the widest outlook — an action that proved to his mind that the bird was not protectively colored. When this was related to a friend who was an advocate of the universal protection idea, he replied, "but think of the 6000 birds concealed by their plumage that you did not see." The author states that he knew from his intimate acquaintance with peafowl that he could not have overlooked any of them, but no conclusive proof could be offered satisfactory to his friend!

There is also some interesting discussion of sexual selection and its part in developing the wonderful plumes of the cock pheasants, this family being notorious for the part that it has played in the elaboration of this and allied theories.

"The thought of the little brown hens picking and choosing among their suitors is charming," says Capt. Beebe, "one would like to think of the hens playing off one cock against another in conscious mental comparison, of appraising this ruff with that patch of gold," etc., etc.; but he adds, "However much I should like to do so I can credit pheasants with no appreciation of the beauties with which they are so generously endowed."

His conclusions are that the whole kaleidoscopic display of the male produces a mental effect upon the hens "not æsthetic, not distinctly critical or attentional, but a slow indirect influence upon the nerves, the arousing of a soothing, pleasing emotion which stimulates the wonderful sequence of instincts which will result in nest-making, egg-laying, the weeks of patient

brooding and the subsequent care of the young." . . . Furthermore, "the male who, either by vanquishing his rivals or who by strength and persistency most frequently and effectively displayed, will win the hen, regardless of whether the actual process be by aesthetic appreciation or by some subconscious hypnotic-like influence."

While we must admit the hypnotic power of the wonderful display of the gorgeous cock-pheasants of many species, we must also, it would seem, admit that all things have a beginning, and how the crude one-wing display of our familiar barnyard cock could have any such hypnotic influence and prove so successful as to start the evolution of the splendid plumage of the Argus and other pheasants we cannot conceive. At the same time we fully admit the strength of Capt. Beebe's contention that we cannot view these things through the bird's eyes nor they through ours. Furthermore we might suggest that the remarkable regularity of the date of migration in transient birds as well as that of the date of nesting would seem to point to the fact that the various instinctive impulses to which our author refers are physiological and are started with a regularity so remarkable that it would hardly seem susceptible of being stimulated by display on the part of the male or by any other external factor. It is not commendable to offer only destructive criticism, but the reviewer must confess himself without any alternative suggestion and is entirely in accord with Capt. Beebe's opening sentence, that "It is staggering to the student of evolution to attempt to explain the origin and development of such a structure as the orange and black ruff of the Golden Pheasant."

It is impossible in the short space of a review to consider the systematic portion of this splendid work in detail. We have already referred to the accounts of the birds in their native haunts. In these Capt. Beebe has managed to incorporate to a remarkable degree the environment of the wild bird, so that we can almost see the scene for ourselves. The sketches are full of what Dr. Spencer Trotter has called the ornithological background. As an example we quote from the account of the Blood Pheasant which our author sought on the 'arctic' meadows of the high Himalayas: "Without warning, the sun dropped behind a distant ridge. It was as if someone had turned out some enormous lamp. Luminous clouds appeared in the air that before had been so clear, and the first whisper of the cold night wind echoed softly in the crags. The insects vanished, and one by one the icicles and rivulets were silenced at the touch of the coming twilight. From a high ravine came the plaintive call of a white-capped redstart, and a gray fox barked from somewhere far off. Then in the rich afterglow, reflected from the mountains of snow, seven birds appeared over the crest of the ridge. They came slowly, one after another, and I knew them at once for the Blood Partridges I had come so far to find. Through my glasses every feather was distinct, every movement clear, as the birds straggled down the slope. Now and then several of them would loiter and pick at the abundant red berries. . . . I watched them eagerly, cau-

tiously — watched them until they vanished among the uppermost ranks of the dwarf rhododendrons. I stood up stiffened with cold and my long waiting. In the west I saw the last pink tinge die out upon the clouds which now hid the snows. As I turned toward camp a single snowflake melted on my face, and I realized anew how grimly winter fights for supremacy far up on the world's roof."

We must make one more quotation, reflecting another side of pheasant history: Capt. Beebe says: "My survey of their haunts made me pessimistic in regard to their future. In India there seemed a slight lessening among the natives of the religious regard for wild life which has been such a boon to the birds in this densely populated part of the world. In the Malay States great rubber plantings threaten the whole fauna of some places. In Nepal and Yunnan the plume hunter is working havoc. In China the changing diet from rice to meat and the demand in Europe for ship-loads of frozen pheasants has swept whole districts clear of these birds." The great war has checked many activities that have made for the destruction of the pheasants, but this, he adds, is perhaps "the last pause in the slow, certain kismet, which from the ultimate increase and spread of mankind, must result in the total extinction of these splendid birds."

After reading this we are more than ever grateful to all who have contributed to make this beautiful work possible. While Capt. Beebe may be the only man who has studied all the types of these wonderful birds in their native haunts,— perhaps the only one who will enjoy that privilege,— his facile pen and ability as a photographer combined with the talents of his corps of artists and the generous support of Col. Kuser, have made it possible for thousands of others to enjoy the reproduction of that which it was given to him to see in reality.— W. S.

Leo Miller's 'In the Wilds of South America.'¹— When Dr. Frank M. Chapman began his investigations of South American bird life in 1911 he took with him to Colombia Leo E. Miller, a young man then quite unknown in the field of zoological exploration. So readily did Mr. Miller adapt himself to the explorer's life and such an adept field collector did he become that he was kept in South America, in the interests of the American Museum, almost continuously from that time until America entered the war. During these six years he practically circled the coast of the southern continent north of Buenos Ayres and visited every one of the republics, carrying on active collecting and exploration in eight of them.

While the technical results of at least a part of Mr. Miller's work have been published by Dr. Chapman and others, mainly in the 'Bulletin' of the American Museum, he has himself prepared the account of his travels,

¹ *In the Wilds of South America, Six Years of Exploration in Columbia, Venezuela, British Guiana, Peru, Bolivia, Paraguay and Brazil.* By Leo E. Miller of the American Museum of Natural History, with over 70 illustrations and a map. New York, Charles Scribners' Sons, 1918. Svo. pp. 1-424.